

1. An antenna system installation comprising a tower/support structure, and an antenna structure mounted on said tower/support structure, said antenna structure comprising:

5 a plurality of antenna elements;

a plurality of power amplifiers, each power amplifier being operatively coupled with one of said antenna elements and mounted closely adjacent to the associated antenna element, such that no appreciable power loss occurs between the power amplifier and the associated antenna element;

10 each said power amplifier comprising a relatively low power, relatively low cost per watt linear power amplifier chip;

a first RF to fiber transceiver mounted on said tower/support structure and operatively coupled with said antenna structure; and

15 a second RF to fiber transceiver mounted adjacent a base portion of said tower/support structure and coupled with said first RF transceiver by an optical fiber cable.

2. A method of installing an antenna system on a tower/support structure, said method comprising:

20 mounting a plurality of antenna elements arranged in an antenna array on said tower/support structure;

coupling a power amplifier comprising a relatively low power, relatively low cost per watt linear power amplifier chip with each of said antenna elements mounted closely adjacent to the associated antenna element, such that no appreciable power loss occurs
25 between the power amplifier and the associated antenna element; and

mounting a first RF to fiber transceiver on said tower/support structure, and coupling said first RF to fiber transceiver with said antenna structure; and mounting a second RF to fiber transceiver adjacent a base portion of said tower/support structure, and coupling said second RF to fiber transceiver with said first RF to fiber transceiver by
30 an optical fiber cable.